IN THE CLAIMS:

1.   (Currently Amended) A method of correcting errors in a data storage medium having a plurality of tracks, comprising:

decoding a first quantity of data that is encoded using an error-correcting code and that spans multiple tracks from the plurality of tracks;

writing to [[the]] a correction history record to indicate ~~which of~~ a first subset of tracks in the multiple tracks that contained errors when the first quantity of data was decoded; and

decoding a second quantity of data that is encoded using the error-correcting code and that spans the multiple tracks, wherein a second subset of tracks in ~~a limited number~~ ~~of~~ the multiple tracks are ~~decoded~~ designated as erasures in accordance with the correction history record such that not all of the multiple tracks that contained errors when the second quantity of data was decoded are present in the second subset.

2.   (Original) The method of claim 1, further comprising:
establishing a correction history record.

3.   (Original) The method of claim 1, wherein the error correcting code is a Bose-Chauduri-Hocquenghem (BCH) code.

4.   (Original) The method of claim 3, wherein the Bose-Chauduri-Hocquenghem code is a Reed-Solomon code.

5.   (Original) The method of claim 1, wherein the data storage medium is magnetic tape.

6.   (Currently Amended) The method of claim 1, further comprising:
calculating a weight for each of the multiple tracks, based upon the correction history record; and

selecting the ~~limited number of the multiple tracks~~ <u>second subset of tracks</u> to be treated as erasures based upon the calculated weight for each of the multiple tracks.

7.   (Currently Amended) The method of claim [[5]]<u>6</u>, further comprising:

examining the correction history record to determine a number of ~~times~~ errors ~~have been~~ found on each of the multiple tracks; and

calculating the weight for each of the multiple tracks as a function of the number of ~~times~~ errors ~~have been~~ found on each of the multiple tracks.

8.   (Currently Amended) A computer program product in a computer-readable medium, for correcting errors in a data storage medium having a plurality of tracks, comprising instructions for:

decoding a first quantity of data that is encoded using an error-correcting code and that spans multiple tracks from the plurality of tracks;

writing to [[the]] <u>a</u> correction history record to indicate ~~which of~~ <u>a first subset of</u> <u>tracks in</u> the multiple tracks <u>that</u> contained errors when the first quantity of data was decoded; and

decoding a second quantity of data that is encoded using the error-correcting code and that spans the multiple tracks, wherein <u>a second subset of tracks in</u> ~~a limited number~~ ~~of~~ the multiple tracks are ~~decoded~~ <u>designated</u> as erasures in accordance with the correction history record <u>such that not all of the multiple tracks that contained errors</u> <u>when the second quantity of data was decoded are present in the second subset</u>.

9.   (Original) The computer program product of claim 8, comprising additional instructions for:

establishing a correction history record.

10.   (Original) The computer program product of claim 8, wherein the error correcting code is a Bose-Chauduri-Hocquenghem (BCH) code.

11.   (Original) The computer program product of claim 10, wherein the Bosc-Chauduri-Hocquenghem code is a Reed-Solomon code.

12.   (Original) The computer program product of claim 8, wherein the data storage medium is magnetic tape.

13.   (Currently Amended) The computer program product of claim 8, comprising additional instructions for:

calculating a weight for each of the multiple tracks, based upon the correction history record; and

selecting the ~~limited number of the multiple tracks~~ second subset to be treated as erasures based upon the calculated weight for each of the multiple tracks.

14.   (Currently Amended) The computer program product of claim 13, comprising additional instructions for:

examining the correction history record to determine a number of ~~times~~ errors ~~have been~~ found on each of the multiple tracks; and

calculating the weight for each of the multiple tracks as a function of the number of ~~times~~ errors ~~have been~~ found on each of the multiple tracks.

15.   (Currently Amended) A data processing system for correcting errors in a data storage medium having a plurality of tracks, comprising:

a bus system;

a processing unit having at least one processor and connected to the bus system;

memory connected to the bus system; and

a set of instructions in the memory, wherein the processing unit executes the set of instructions to perform the acts of:

decoding a first quantity of data that is encoded using an error-correcting code and that spans multiple tracks from the plurality of tracks;

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writing to [[the]] a correction history record to indicate ~~which of~~ a first subset of tracks in the multiple tracks that contained errors when the first quantity of data was decoded; and

decoding a second quantity of data that is encoded using the error-correcting code and that spans the multiple tracks, wherein a second subset of tracks in ~~a limited number of~~ the multiple tracks are ~~decoded~~ designated as erasures in accordance with the correction history record such that not all of the multiple tracks that contained errors when the second quantity of data was decoded are present in the second subset.

16.   (Original) The data processing system of claim 15, wherein the processing unit executes the set of instructions to perform the additional act of:

establishing a correction history record.

17.   (Original) The data processing system of claim 15, wherein the error correcting code is a Bose-Chauduri-Hocquenghem (BCH) code.

18.   (Original) The data processing system of claim 17, wherein the Bose-Chauduri-Hocquenghem code is a Reed-Solomon code.

19.   (Original) The data processing system of claim 15, wherein the data storage medium is magnetic tape.

20.   (Currently Amended) The data processing system of claim 15, wherein the processing unit executes the set of instructions to perform the additional acts of:

calculating a weight for each of the multiple tracks, based upon the correction history record; and

selecting the ~~limited number of the multiple tracks~~ second subset to be treated as erasures based upon the calculated weight for each of the multiple tracks.

21. (Currently Amended) The data processing system of claim 20, wherein the processing unit executes the set of instructions to perform the additional acts of:

examining the correction history record to determine a number of ~~times~~ errors ~~have been~~ found on each of the multiple tracks; and

calculating the weight for each of the multiple tracks as a function of the number of ~~times~~ errors ~~have been~~ found on each of the multiple tracks.

22. (Original) The data processing of claim 15, wherein the data processing system is connected to a data storage device.

23. (Original) The data processing system of claim 15, wherein the data processing system is embedded within a data storage device and the data storage device reads the data storage medium.

24. (Currently Amended) The data processing system of claim 23, wherein the data storage device reads the data storage medium <u>using a read/write head and a read/write interface that allows the processing unit to control reading from and writing to the data storage medium</u>.

25. (New) The method of claim 1, further comprising:

removing a data track from the second subset based on a calculated weight for the data track when a quantity of erasures and errors eliminates an ability to correct errors.

26. (New) The computer program product of claim 8, comprising additional instructions for:

removing a data track from the second subset based on a calculated weight for the data track when a quantity of erasures and errors eliminates an ability to correct errors.

27. (New) The data processing system of claim 15, wherein the processing unit executes the set of instructions to perform the additional act of:

removing a data track from the second subset based on a calculated weight for the data track when a quantity of erasures and errors eliminates an ability to correct errors.